

APPENDIX E

WELL PERMIT

The New Jersey Department of Environmental Protection grants this permit in accordance with your application, attachments accompanying same application, and applicable laws and regulations. This permit is also subject to further conditions and stipulations enumerated in the supporting documents which are agreed to by the permittee upon acceptance of the permit

Certifying Driller: CARMINE DECORSO, JOURNEYMAN LICENSE # 0002423

Permit Issued to: LUTZ ENVIRONMENTAL

Company Address: 2020 CLINTON ST PO BOX 1247 LINDEN, NJ 07036

PROPERTY OWNER

Name: ARSYNCO INC ARSYNCO INC

Organization: Arsynco Inc

Address: PO# Box 8

City: Carlstadt

State: New Jersey

Zip Code: 07072

PROPOSED WELL LOCATION

Facility Name: Former Arsynco Inc

Address: 511 Thirteenth Street

County: Bergen

Municipality: Carlstadt Boro

Lot: 1

Block: 91

Easting (X): 607537 **Northing (Y):** 729543

Coordinate System: NJ State Plane (NAD83) - USFEET

Local ID: MW-43D

SITE CHARACTERISTICS

PROPOSED CONSTRUCTION

WELL USE: MONITORING

Other Use(s): _____

Diameter (in.): 4

Regulatory Program

Requiring Wells/Borings: _____

Depth (ft.): 30

Case ID Number: _____

Pump Capacity (gpm): 0

Deviation Requested: N

Drilling Method: Hollow Stem Augers

Attachments: _____

SPECIFIC CONDITIONS/REQUIREMENTS

Approval Date: March 16, 2015
Expiration Date: March 15, 2016

Approved by the authority of:
Bob Martin
Commissioner

Terry D. Pilawski
Terry Pilawski, Chief
Bureau of Water Allocation and Well Permitting

MONITORING WELL RECORD

PROPERTY OWNER: ARSYNCO INC ARSYNCO INC

Company/Organization: Arsynco Inc

Address: PO# Box 8 Carlstadt, New Jersey 07072

WELL LOCATION: Former Arsynco Inc

Address: 511 Thirteenth Street

County: Bergen

Municipality: Carlstadt Boro

Lot: 1

Block: 91

Easting (X): 607577 Northing (Y): 729578

Coordinate System: NJ State Plane (NAD83) - USFEET

DATE WELL STARTED: March 25, 2015

DATE WELL COMPLETED: March 25, 2015

WELL USE: MONITORING

Other Use(s): _____

Local ID: MW-43D

WELL CONSTRUCTION

Total Depth Drilled (ft.): 32

Finished Well Depth (ft.): 32

Well Surface: Above Grade

	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt/Rating/Screen # Used (lbs/ch no.)
Borehole	0	32	12		
Casing	0	27	4	PVC	Sch 40
Casing	0	16	12	Steel	LBS
Screen	27	32	4	PVC	.010 slot

	Depth to Top (ft.)	Depth to Bottom (ft.)	Outer Diameter (in.)	Inner Diameter (in.)	Material		
					Bentonite (lbs.)	Neat Cement (lbs.)	Water (gal.)
Grout	0	23	12	4	77.5	1457	133.3
Gravel Pack	23	32	12	4	more #1		

Grouting Method: Pressure method (Tremie Pipe)

Drilling Method: Air Rotary/HSA

ADDITIONAL INFORMATION

Protective Casing: Yes

Static Water Level: 6 ft. below land surface

Water Level Measure Tool: m-scope

Well Development Period: 1 hrs.

Method of Development: 12V pump

Pump Type: _____

Pump Capacity: gpm

Total Design Head: ft.

Drilling Fluid: _____

Drill Rig: IR T3W

Health and Safety Plan Submitted? Yes

ATTACHMENTS:

GEOLOGIC LOG

0 - 4.5: dark grey ML - Inorganic silts, very fine sands, rock four, silty or clayey fine sands silt w/trace sand and coarse gravel

4.5 - 9: black OH - Organic clays of medium to high plasticity silt w/peat and organics

9 - 11: brown SM - Silty sands, sand-silt mixtures silty medium-fine sand trace clay

11 - 22: dark tan CL - Inorganic clays of low to medium plasticity, gravelly/sandy/silty/lean clays clay

22 - 32: light brown and grey CL - Inorganic clays of low to medium plasticity, gravelly/sandy/silty/lean clays clay silt w/some fine sand trace of clay stringers

ADDITIONAL INFORMATION:

Driller of Record: Nick Woetko,
MONITORING LICENSE # 545114

Company: LUTZ ENVIRONMENTAL

JMC



New Jersey Department of Environmental Protection
Site Remediation Program

**MONITORING WELL CERTIFICATION FORM A - AS-BUILT
CERTIFICATION**

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: FORMER ARSYNCO INC.
 List all AKAs: _____
 Street Address: 511 THIRTEENTH STREET
 Municipality: CARLSTADT BORO (Township, Borough or City)
 County: BERGEN Zip Code: 07072
 Program Interest (PI) Number(s): _____ Case Tracking Number(s): _____

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner ARSYNCO INC PO# Box 8 CARLSTADT NJ 07072
 2. Well Location (Street Address) 511 THIRTEENTH STREET
 3. Well Location (Municipal Block and Lot) Block# 91 Lot # 1

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing):... E201502212
 2. Site Well Number as shown on application or plans: MW-43D
 3. Well Completion Date: 3-25-15
 4. Distance from Top of Casing (cap off) to ground surface (nearest 0.01'): 2'
 5. Total Depth of Well to the nearest 1/2 foot: 32'
 6. Depth to Top of Screen (or top of open hole) from top of casing (nearest 0.01'): 27'
 7. Screen Length (or length of open hole) in feet: 5'
 8. Screen or Slot Size: 0.10 Slot
 9. Screen or Slot Material: SCH 40 PVC 0.10 slot
 10. Casing Material (PVC, steel, or other - specify): STEEL + PVC
 11. Casing Diameter (Inches): STEEL / PVC 18" / 4"
 12. Static Water Level from top of casing at the time of installation (nearest 0.01'): 6'
 13. Yield (gallons per minute): 1/4 GPM.
 14. Development Technique (specify): 12 V Pump
 15. Length of Time well is developed/pumped or bailed (hours and minutes): 1 HR



New Jersey Department of Environmental Protection
Site Remediation Program

Monitoring Well Certification Form B - Location Certification

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Arsynco, Inc.

List all AKAs: _____

Street Address: 511 13th Street

Municipality: Borough of Carlstadt (Township, Borough or City)

County: Bergen Zip Code: 07072

Program Interest (PI) Number(s): 93024 Case Tracking Number(s): _____

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner Arsynco, Inc.

2. Well Location (Street Address) 511 13th Street, Carlstadt NJ

3. Well Location (Municipal Block and Lot) Block# 91 Lot # 1

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing): E201502212

2. Site Well Number (As shown on application or plans): MW 43D

3. Geographic Coordinate NAD 83 to nearest 1/100 of a second:

Latitude: North 40-50-07.89 Longitude: West 74-04-58.49

4. New Jersey State Plane Coordinates NAD 83 datum, US survey feet units, to nearest foot:

North 729,552.5 East 607,528.7

5. Elevation of Top of Inner Casing (cap off) at reference mark (nearest 0.01'): 6.88

Elevation Top of Outer casing: 7.22 Elevation of ground: 4.44

Check one: ☒ NAVD 88 ☐ NVDG29 ☐ On Site Datum ☐ Other

6. Source of elevation datum (benchmark, number/description and elevation/datum). If an on-site datum is used, identify here, assume datum of 100', and give approximated actual elevation (referencing NAVD 88).

Elevations based on GPS observations.

7. Significant observations and notes:

None

SECTION D. LAND SURVEYOR'S CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment.

SEAL

Professional Land Surveyor's Signature: _____ Date _____

Surveyor's Name: Russell J. Palubniak License Number: NJPLS#37953

Firm Name: DPCSS Land Surveyors Certificate of Authorization #: _____

Mailing Address 14 Carriage Way

City/Town: Barneget State New Jersey Zip Code: 08005

Phone Number 609-276-4902 Ext.: _____ Fax: 609-698-5350

JMC Environmental Consultants, Inc.2109 Bridge Avenue Bldg. B, Point Pleasant, New Jersey 08742
Phone: (732) 295-2144 Fax: (732) 295-2150**Boring for Location: MW-43D**

Permit #: N/A	Location: Foot of 13th Street, Carlstadt, New Jersey	G.W. Encountered: 1.0' BSG	Static Water: 2.99' TOC
Site Name: Arsynco	Project: ISRA case	JMC Job #: 22126	Well - Depth: 31.5' BSG
Owner: Arsynco	Use: Groundwater sampling	Casing - Length: 12' & 26.5'	Diameter: 4"
Boring Drill Date: 3/25/15	Type: Hollow Stem	Screen - Length: 5'	Diameter: 12" & 4"
Boring Driller: Lutz Environmental Well Drilling	Purge Method: Submersible Typhoon pump	Screen Type: Sch 40 .010 in.	Diameter: 4"
Boring Rig: Ingersoll Rand T3W Rig	Sample Method: N/A	Bentonite: 0 - 25' below grade	
Driller/Helper: Nick / Ronnie	Sample Parameters: N/A	Sand Pack: 2.0' above screen	
Sampling Method: N/A	Sampler: N/A	Depth to PVC Rim: +2.44'	

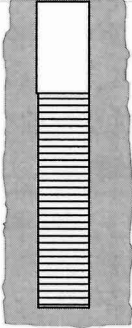
Depth (ft.)	Sample ID and Depth	OWM (Meter Units)	Blows/6.0"	Recovery	Soil Type	Soil/Geologic Description	Depth (ft.)	Boring Diagram
1		250				0'-5.0' Brown black fine to medium silty SAND with fine crushed gravel	1	
2						(wet at 1.0')	2	
3		297					3	
4							4	
5						5.0'-9.0' Brown black fine to medium GRAVEL with organics	5	
6		197					6	
7							7	
8							8	
9		101				9.0'-11.0' Brown fine to medium silty SAND	9	
10							10	
11						11.0'-21.0' Dark Grey CLAY with some silt	11	
12		125					12	
13						12" Steel casing set to 12'	13	
14		66.8					14	
15							15	
16							16	
17		23.8					17	
18							18	
19							19	
20							20	
21		0.0				21.0'-28.0' Grey CLAY with little silt	21	
22							22	
23							23	
24							24	
25							25	

JMC Environmental Consultants, Inc.

2109 Bridge Avenue Bldg. B, Point Pleasant, New Jersey 08742
Phone: (732) 295-2144 Fax: (732) 295-2150

Boring for Location: MW-43D

Permit #: N/A	Location: Foot of 13th Street, Carlstadt, New Jersey	G.W. Encountered: 1.50' BSG	Static Water: 2.99' TOC
Site Name: Arsynco	Project: ISRA case	JMC Job #: 22126	Well - Depth: 31.5' BSG
Owner: Arsynco	Use: Groundwater sampling	Casing - Length: 12' & 26.5'	Diameter: 12" & 4"
Boring Drill Date: 3/25/15	Type: Hollow Stem	Screen - Length: 5'	Diameter: 4"
Boring Driller: Lutz Environmental Well Drilling	Purge Method: Submersible Typhoon pump	Screen Type: Sch 40 .010 in.	
Boring Rig: Ingersall Rand T3W Rig	Sample Method: N/A	Bentonite: 0 - 25' below grade	
Driller/Helper: Nick / Ronnie	Sample Parameters: N/A	Sand Pack: 2.0' above screen	
Sampling Method: N/A	Sampler: N/A	Depth to PVC Rim: +2.44'	

Depth (ft.)	Sample ID and Depth	OWM (Meter Units)	Blows/6.0"	Recovery	Soil Type	Soil/Geologic Description	Depth (ft.)	Boring Diagram
26							26	
27							27	
28		12.3				28.0'-32.0'	28	
29						Grey CLAY with some silt and trace (-) fine sand	29	
30							30	
31						Driller Note: formation tightened up @ 32.0'	31	
32							32	
33						Boring advanced to 32 feet below grade.	33	
34						Monitoring well set at 31.5 feet below grade.	34	
35						Groundwater encountered at 1.0 feet below grade.	35	
36						Steel casing set at 12' below grade	36	
37						*Drawing vertically to scale	37	
38							38	
39							39	
40							40	
41							41	
42							42	
43							43	
44							44	
45							45	
46							46	
47							47	
48							48	
49							49	
50							50	

WELL PERMIT

The New Jersey Department of Environmental Protection grants this permit in accordance with your application, attachments accompanying same application, and applicable laws and regulations. This permit is also subject to further conditions and stipulations enumerated in the supporting documents which are agreed to by the permittee upon acceptance of the permit

Certifying Driller: CARMINE DECORSO, JOURNEYMAN LICENSE # 0002423

Permit Issued to: LUTZ ENVIRONMENTAL

Company Address: 2020 CLINTON ST PO BOX 1247 LINDEN, NJ 07036

PROPERTY OWNER

Name: ARSYNCO INC ARSYNCO INC

Organization: Arsynco Inc

Address: PO# Box 8

City: Carlstadt

State: New Jersey

Zip Code: 07072

PROPOSED WELL LOCATION

Facility Name: Former Arsynco Inc

Address: 511 Thirteenth Street

County: Bergen

Municipality: Carlstadt Boro

Lot: 1

Block: 91

Easting (X): 607588 **Northing (Y):** 729669

Local ID: MW-44DD

Coordinate System: NJ State Plane (NAD83) - USFEET

SITE CHARACTERISTICS

PROPOSED CONSTRUCTION

WELL USE: MONITORING

Other Use(s): _____

Diameter (in.): 2

Regulatory Program

Depth (ft.): 85

Requiring Wells/Borings: _____

Pump Capacity (gpm): 0

Case ID Number: _____

Drilling Method: Mud Rotary

Deviation Requested: N

Attachments: _____

SPECIFIC CONDITIONS/REQUIREMENTS

Approval Date: March 16, 2015
Expiration Date: March 15, 2016

Approved by the authority of:
Bob Martin
Commissioner

Well Permit – Page 1 of 2

Terry D. Pilawski

Terry Pilawski, Chief
Bureau of Water Allocation and Well Permitting

MONITORING WELL RECORD

PROPERTY OWNER: ARSYNCO INC ARSYNCO INC

Company/Organization: Arsynco Inc

Address: PO# Box 8 Carlstadt, New Jersey 07072

WELL LOCATION: Former Arsynco Inc

Address: 511 Thirteenth Street

County: Bergen

Municipality: Carlstadt Boro

Lot: 1

Block: 91

Easting (X): 607546 Northing (Y): 729657

Coordinate System: NJ State Plane (NAD83) - USFEET

DATE WELL STARTED: March 26, 2015

DATE WELL COMPLETED: March 27, 2015

WELL USE: MONITORING

Other Use(s): _____

Local ID: MW-44DD

WELL CONSTRUCTION

Total Depth Drilled (ft.): 98

Finished Well Depth (ft.): 98

Well Surface: Above Grade

	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt/Rate/Screen # Used (lbs/ch no.)
Borehole	0	40	10		
Borehole	40	98	6		
Casing	0	14	10	Steel	LBS
Casing	0	93	2	PVC	Sch 40
Casing	0	40	6	Steel	19 LBS
Screen	93	98	2	PVC	.010 slot

	Depth to Top (ft.)	Depth to Bottom (ft.)	Outer Diameter (in.)	Inner Diameter (in.)	Bentonite (lbs.)	Neat Cement (lbs.)	Water (gal.)
Grout	0	90	6	2	112.5	2115	193.5
Grout	0	40	10	6	57.5	1081	98.9
Gravel Pack	90	98	6	2			

Grouting Method: Pressure method (Tremie Pipe)

Drilling Method: Other

ADDITIONAL INFORMATION

Protective Casing: Yes

Static Water Level: 19 ft. below land surface

Water Level Measure Tool: m-scope

Well Development Period: 1 hrs.

Method of Development: 12V pump

Pump Type: _____

Pump Capacity: gpm

Total Design Head: ft.

Drilling Fluid: Quick Gel

Drill Rig: IR T3W

Health and Safety Plan Submitted? Yes

ATTACHMENTS:

GEOLOGIC LOG

0 - 6: dark grey ML - Inorganic silts, very fine sands, rock four, silty or clayey fine sands silt w/medium-fine sand & traces of coarse gravel
6 - 9: black PT - Peat, muck, and other highly organic soils peat and organics w/trace clay & silt
9 - 22: brown CL - Inorganic clays of low to medium plasticity, gravelly/sandy/silty/lean clays clay
22 - 31: light brown ML - Inorganic silts, very fine sands, rock four, silty or clayey fine sands silt w/trace medium-fine sand trace clay stringers
31 - 37: grey some brown ML - Inorganic silts, very fine sands, rock four, silty or clayey fine sands clayey silt
37 - 63: light grey and brown ML - Inorganic silts, very fine sands, rock four, silty or clayey fine sands silt w/fine sand clay stringers
63 - 78: light grey and multi color SM - Silty sands, sand-silt mixtures medium-coarse sand some silt & clay stringers

Driller of Record: Carmine DeCorso,
JOURNEYMAN LICENSE # 0002423

Company: LUTZ ENVIRONMENTAL

JMC



**New Jersey Department of Environmental Protection
Site Remediation Program**

**MONITORING WELL CERTIFICATION FORM A - AS-BUILT
CERTIFICATION**

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: FORMER ARSYNCO INC
 List all AKAs: _____
 Street Address: 511 THIRTEENTH STREET
 Municipality: CARLSTADT BORO (Township, Borough or City)
 County: BERGEN Zip Code: 07072
 Program Interest (PI) Number(s): _____ Case Tracking Number(s): _____

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner ARSYNCO INC PO# Box 8 Carlstadt NJ 07072
 2. Well Location (Street Address) 511 THIRTEENTH STREET
 3. Well Location (Municipal Block and Lot) Block# 91 Lot # 1

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing):... E201502215
 2. Site Well Number as shown on application or plans: MW-44 DD
 3. Well Completion Date: 3-26-15
 4. Distance from Top of Casing (cap off) to ground surface (nearest 0.01'): 2'
 5. Total Depth of Well to the nearest 1/2 foot: 98'
 6. Depth to Top of Screen (or top of open hole) from top of casing (nearest 0.01'): 93'
 7. Screen Length (or length of open hole) in feet: 5'
 8. Screen or Slot Size: 0.10 Slot
 9. Screen or Slot Material: SCH 40 Ruc 0.10 Slot
 10. Casing Material (PVC, steel, or other - specify): STEEL + Ruc
 11. Casing Diameter (inches): STEEL / STEEL Ruc 10" / 6" / 2"
 12. Static Water Level from top of casing at the time of installation (nearest 0.01'): 19'
 13. Yield (gallons per minute): 1/4 GPM
 14. Development Technique (specify): 12 V Pump
 15. Length of Time well is developed/pumped or bailed (hours and minutes): 1 HR



New Jersey Department of Environmental Protection
Site Remediation Program

Monitoring Well Certification Form B - Location Certification

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Arsynco, Inc.

List all AKAs: _____

Street Address: 511 13th Street

Municipality: Borough of Carlstadt (Township, Borough or City)

County: Bergen Zip Code: 07072

Program Interest (PI) Number(s): 93024 Case Tracking Number(s): _____

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner Arsynco, Inc.

2. Well Location (Street Address) 511 13th Street, Carlstadt NJ

3. Well Location (Municipal Block and Lot) Block# 91 Lot # 1

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing): E201502215

2. Site Well Number (As shown on application or plans): MW 44DD

3. Geographic Coordinate NAD 83 to nearest 1/100 of a second:

Latitude: North 40-50-08.85 Longitude: West 74-04-58.03

4. New Jersey State Plane Coordinates NAD 83 datum, US survey feet units, to nearest foot:

North 729,648.8 East 607,564.2

5. Elevation of Top of Inner Casing (cap off) at reference mark (nearest 0.01'): 6.76

Elevation Top of Outer casing: 6.93 Elevation of ground: 4.18

Check one: ☒ NAVD 88 ☐ NVDG29 ☐ On Site Datum ☐ Other

6. Source of elevation datum (benchmark, number/description and elevation/datum). If an on-site datum is used, identify here, assume datum of 100', and give approximated actual elevation (referencing NAVD 88).

Elevations based on GPS observations.

7. Significant observations and notes:

None

SECTION D. LAND SURVEYOR'S CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment.

SEAL

Professional Land Surveyor's Signature: _____ Date _____

Surveyor's Name: Russell J. Palubniak License Number: NJPLS#37953

Firm Name: DPCSS Land Surveyors Certificate of Authorization #: _____

Mailing Address 14 Carriage Way

City/Town: Barnegat State New Jersey Zip Code: 08005

Phone Number 609-276-4902 Ext.: _____ Fax: 609-698-5350

JMC Environmental Consultants, Inc.2109 Bridge Avenue Bldg. B, Point Pleasant, New Jersey 08742
Phone: (732) 295-2144 Fax: (732) 295-2150**Boring for Location: MW-44DD**

Permit #: N/A	Location: Foot of 13th Street, Carlstadt, New Jersey	G.W. Encountered: 1.50' BSG	Static Water: 0.99' TOC
Site Name: Arsynco	Project: ISRA case	JMC Job #: 22126	Well - Depth: 101.5' BSG
Owner: Arsynco	Use: Groundwater sampling	Casing - Length: 14' & 40' & 96'	Diameter: 2"
Boring Drill Date: 3/26/15 and 3/27/2015	Type: Mud Rotary	Screen - Length: 5'	Diameter: 10" & 6" & 2"
Boring Driller: Lutz Environmental Well Drilling	Purge Method: Submersible Typhoon pump	Screen Type: Sch 40 .010 in.	Diameter: 2"
Boring Rig: Ingersoll Rand T3W Rig	Sample Method: N/A	Bentonite: 0 - 93' below grade	
Driller/Helper: Nick / Ronnie	Sample Parameters: N/A	Sand Pack: 3.5' above screen	
Sampling Method: N/A	Sampler: N/A	Depth to PVC Rim: +2.58'	

Depth (ft.)	Sample ID and Depth (ft.)	OCM (Meter Units)	Blows/6.0"	Recovery	Soil Type	Soil/Geologic Description	Depth (ft.)	Boring Diagram
1		0.0				0'-5.0' Black fine to medium silty SAND with gravel	1	
2						(wet at 1.5')	2	
3							3	
4							4	
5		23.2				5.0'-7.0' Black brown meadow mat with fine to medium SAND trace (-) fine gravel	5	
6							6	
7						7.0'-17.0' Grey CLAY	7	
8							8	
9							9	
10							10	
11							11	
12							12	
13							13	
14						10" Steel Casing set to 14.0'	14	
15						Start of Mud rotary at 14.0'	15	
16							16	
17						17.0'-30.0' Drilling Mud: Formation is Grey SILT with some clay and trace (-) fine sand (loose formation)	17	
18							18	
19							19	
20							20	
21							21	
22							22	
23							23	
24							24	
25							25	

JMC Environmental Consultants, Inc.2109 Bridge Avenue Bldg. B, Point Pleasant, New Jersey 08742
Phone: (732) 295-2144 Fax: (732) 295-2150**Boring for Location: MW-44DD**

Permit #: N/A	Location: Foot of 13th Street, Carlstadt, New Jersey	G.W. Encountered: 1.50' BSG	Static Water: 0.99' TOC
Site Name: Arsynco	Project: ISRA case	JMC Job #: 22126	Well - Depth: 101.5' BSG
Owner: Arsynco	Use: Groundwater sampling	Casing - Length: 14' & 40' & 96'	Diameter: 2"
Boring Drill Date: 3/26/15 and 3/27/2015	Type: Mud Rotary	Screen - Length: 5'	Diameter: 2"
Boring Driller: Lutz Environmental Well Drilling	Purge Method: Submersible Typhoon pump	Screen Type: Sch 40 .010 in.	
Boring Rig: Ingersall Rand T3W Rig	Sample Method: N/A	Bentonite: 0 - 93' below grade	
Driller/Helper: Nick / Ronnie	Sample Parameters: N/A	Sand Pack: 3.5' above screen	
Sampling Method: N/A	Sampler: N/A	Depth to PVC Rim: +2.58'	

Depth (ft.)	Sample ID and Depth	OVN (Meter Units)	Blows/6.0"	Recovery	Soil Type	Soil/Geologic Description	Depth (ft.)	Boring Diagram
26							26	
27							27	
28							28	
29							29	
30							30	
31						30.0'-40.0' Drilling Mud: Formation is Grey CLAY with silt and sand (Tight Formation)	31	
32							32	
33							33	
34							34	
35							35	
36							36	
37							37	
38							38	
39							39	
40							40	
41						40.0'-58.0' Drilling Mud: Formation is Grey CLAY (Tight Formation)	41	
42							42	
43							43	
44							44	
45							45	
46							46	
47							47	
48							48	
49							49	
50							50	

JMC Environmental Consultants, Inc.

2109 Bridge Avenue Bldg. B, Point Pleasant, New Jersey 08742
Phone: (732) 295-2144 Fax: (732) 295-2150

Boring for Location: MW-44DD

Permit #: N/A	Location: Foot of 13th Street, Carlstadt, New Jersey	G.W. Encountered: 1.50' BSG	Static Water: 0.99' TOC
Site Name: Arsynco	Project: ISRA case	JMC Job #: 22126	Well - Depth: 101.5' BSG
Owner: Arsynco	Use: Groundwater sampling	Casing - Length: 14' & 40' & 96'	Diameter: 2"
Boring Drill Date: 3/26/15 and 3/27/2015	Type: Mud Rotary	Screen - Length: 5'	Diameter: 10" & 6" & 2"
Boring Driller: Lutz Environmental Well Drilling	Purge Method: Submersible Typhoon pump	Screen Type: Sch 40 .010 in.	Diameter: 2"
Boring Rig: Ingersoll Rand T3W Rig	Sample Method: N/A	Bentonite: 0 - 93' below grade	
Driller/Helper: Nick / Ronnie	Sample Parameters: N/A	Sand Pack: 3.5' above screen	
Sampling Method: N/A	Sampler: N/A	Depth to PVC Rim: +2.58'	

Depth (ft.)	Sample ID and Depth	Q/M (Meter Units)	Blows/6.0"	Recovery	Soil Type	Soil/Geologic Description	Depth (ft.)	Boring Diagram
51							51	
52							52	
53							53	
54							54	
55						Driller Note: Formation loosened at 54.0'	55	
56							56	
57							57	
58							58	
59					58.0'-70.0'	Drilling Mud : Formation is Brown with fine silty SAND and crushed gravel	59	
60							60	
61							61	
62							62	
63							63	
64							64	
65							65	
66							66	
67							67	
68							68	
69							69	
70							70	
71					70.0'-85.0'	Drilling Mud: Formation is Brown red crushed GRAVEL (Loose Formation)	71	
72							72	
73							73	
74							74	
75							75	

JMC Environmental Consultants, Inc.

2109 Bridge Avenue Bldg. B, Point Pleasant, New Jersey 08742

Phone: (732) 295-2144 Fax: (732) 295-2150

Boring for Location: MW-44DD

Permit #: N/A	Location: Foot of 13th Street, Carlstadt, New Jersey	G.W. Encountered: 1.50' BSG	Static Water: 0.99' TOC
Site Name: Arsynco	Project: ISRA case	JMC Job #: 22126	Well - Depth: 101.5' BSG
Owner: Arsynco	Use: Groundwater sampling	Casing - Length: 14' & 40' & 96'	Diameter: 2"
Boring Drill Date: 3/26/15 and 3/27/2015	Type: Mud Rotary	Screen - Length: 5'	Diameter: 10" & 6" & 2"
Boring Driller: Lutz Environmental Well Drilling	Purge Method: Submersible Typhoon pump	Screen Type: Sch 40 .010 in.	Diameter: 2"
Boring Rig: Ingersall Rand T3W Rig	Sample Method: N/A	Bentonite: 0 - 93' below grade	
Driller/Helper: Nick / Ronnie	Sample Parameters: N/A	Sand Pack: 3.5' above screen	
Sampling Method: N/A	Sampler: N/A	Depth to PVC Rim: +2.58'	

Depth (ft.)	Sample ID and Depth	Q/M (Meter Units)	Blows/6.0"	Recovery	Soil Type	Soil/Geologic Description	Depth (ft.)	Boring Diagram
76							76	
77							77	
78							78	
79							79	
80							80	
81							81	
82						Driller Note: Tightened up from 80.0'-85.0'	82	
83							83	
84							84	
85							85	
86					85.0'-105.0'	Drilling Mud: Formation is Brown red with fine sand and trace (-) fine crushed rock	86	
87							87	
88							88	
89							89	
90							90	
91							91	
92							92	
93							93	
94							94	
95							95	
96							96	
97							97	
98							98	
99							99	
100							100	

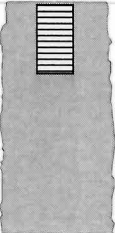
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Phone: (732) 295-2144 Fax: (732) 295-2150

Boring for Location: MW-44DD

Permit #: N/A	Location: Foot of 13th Street, Carlstadt, New Jersey	G.W. Encountered: 1.50' BSG	Static Water: 0.99' TOC
Site Name: Arsynco	Project: ISRA case	JMC Job #: 22126	Well - Depth: 101.5' BSG
Owner: Arsynco	Use: Groundwater sampling	Casing - Length: 14' & 40' & 96'	Diameter: 2"
Boring Drill Date: 3/26/15 and 3/27/2015	Type: Mud Rotary	Screen - Length: 5'	Diameter: 10" & 6" & 2"
Boring Driller: Lutz Environmental Well Drilling	Purge Method: Submersible Typhoon pump	Screen Type: Sch 40 .010 in.	Diameter: 2"
Boring Rig: Ingersoll Rand T3W Rig	Sample Method: N/A	Bentonite: 0 - 93' below grade	
Driller/Helper: Nick / Ronnie	Sample Parameters: N/A	Sand Pack: 3.5' above screen	
Sampling Method: N/A	Sampler: N/A	Depth to PVC Rim: +2.58'	

Depth (ft.)	Sample ID and Depth	Q/M (Meter Units)	Blows/6.0"	Recovery	Soil Type	Soil/Geologic Description	Depth (ft.)	Boring Diagram
101							101	
102							102	
103							103	
104							104	
105							105	
106						Boring advanced to 105 feet below grade.	106	
107						Monitoring well set at 101.5 feet below grade.	107	
108						Groundwater encountered at 1.50 feet below grade.	108	
109						10" Steel casing set at 14.0'	109	
110						6" Steel casing set at 40.0'	110	
111							111	
112							112	
113							113	
114							114	
115							115	
116							116	
117							117	
118							118	
119							119	
120							120	
121							121	
122							122	
123							123	
124							124	
125							125	